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P30186

Serial No. 10/587,362

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Klaus ENDRES et al.

**Confirmation No.: 8426**

Group Art Unit: 1763

Appl. No. : 10/587,362

Examiner: Li, Aiqun

I. A. Filed : January 28, 2005

For : CONSOLIDATION AGENTS AND THE USE THEREOF FOR  
CONSOLIDATING MOLDED BODIES AND GEOLOGICAL  
FORMATIONS CONSISTING OF POROUS OR PARTICULATE  
MATERIALS

**AMENDMENT UNDER 37 C.F.R. § 1.116**

Commissioner for Patents  
U.S. Patent and Trademark Office  
Customer Service Window, Mail Stop AF  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

This is in response to the Final Office Action mailed from the U.S. Patent and Trademark Office on November 10, 2011. Inasmuch as the three-month shortened statutory period for reply is originally set in the Office Action to expire on February 10, 2012, this response is being filed by the initial due date for response. However, if any extension of time is necessary, this is an express request for any necessary extension of time and authorization to charge any required extension of time fee or any other fees which may be required to preserve the pendency of the present application, including any extension of time fees which may be required for an Examiner's Amendment, to Deposit Account No. 50-5475.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 3 of this paper.

**Remarks/Arguments** begin on page 8 of this paper.

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. – 38. (cancelled)

39. (currently amended) A consolidated material, wherein before consolidation the material is at least one of porous and particulate and wherein the material is consolidated with a consolidating agent which is particle-free and comprises at least one of a hydrolysate and a precondensate of (a) one or more organosilanes of formula (I)



wherein the radicals R independently represent non-hydrolysable groups, the radicals X independently represent hydrolysable groups or hydroxyl groups, and n is 1, 2 or 3, ~~at least one of the one or more organosilanes of formula (I) being an arylsilane;~~ and (b) ~~optionally,~~ one or more hydrolysable silanes of formula (II)



wherein the radicals X are as defined for formula (I),

provided that the agent comprises at least one of a hydrolysate and a precondensate of compounds which comprise methyltriethoxysilane, phenyltriethoxysilane, and tetraethoxysilane.

40. - 42. (cancelled)

43. (currently amended) The consolidated material of claim 39, wherein the at least one of a hydrolysate and a precondensate has been prepared in the presence of one or more metal compounds of formula (III)



wherein M is selected from metals of main groups I to VIII ~~and~~ or subgroups II to VIII of the Periodic Table of Elements and wherein the radicals X independently represent hydrolysable groups or hydroxyl groups and two radicals X may be combined to form an oxo group, and a corresponds to the valence of M.

44. (previously presented) The consolidated material of claim 39, wherein before consolidation the material is porous.

45. (previously presented) The consolidated material of claim 44, wherein the material comprises sandstone.

46. (previously presented) The consolidated material of claim 39, wherein the consolidated material is present as a molded article.

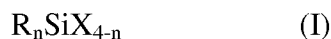
47. (previously presented) The consolidated material of claim 46, wherein the material before consolidation comprises sand.

48. (previously presented) The consolidated material of claim 46, wherein the material before consolidation comprises granules.

49. (previously presented) The consolidated material of claim 46, wherein the material before consolidation comprises one or more of glass, a metal powder, a ceramic powder, glass-ceramic, and a cermet.

50. – 54. (cancelled)

55. (new) A consolidated material, wherein before consolidation the material is at least one of porous and particulate and comprises sandstone and wherein the material is consolidated with a consolidating agent which is particle-free and comprises at least one of a hydrolysate and a precondensate of (a) one or more organosilanes of formula (I)



wherein the radicals R independently represent non-hydrolysable groups, the radicals X independently represent hydrolysable groups or hydroxyl groups, and n is 1, 2 or 3, at least one of the one or more organosilanes of formula (I) being an arylsilane; and (b) optionally, one or more hydrolysable silanes of formula (II)



wherein the radicals X are as defined for formula (I).

56. (new) The consolidated material of claim 55, wherein the agent comprises at least one of a hydrolysate and a precondensate of compounds comprising (a1) an alkylsilane, (a2) an arylsilane, and (b) an orthosilicic ester.

57. (new) The consolidated material of claim 55, wherein the at least one of a hydrolysate and a precondensate has been prepared in the presence of one or more metal compounds of formula (III)



wherein M is selected from metals of main groups I to VIII or subgroups II to VIII of the Periodic Table of Elements and wherein the radicals X independently represent hydrolysable groups or hydroxyl groups and two radicals X may be combined to form an oxo group, and a corresponds to the valence of M.

58. (new) The consolidated material of claim 55, wherein before consolidation the material is porous.

59. (new) The consolidated material of claim 55, wherein the consolidated material is present as a molded article.

60. (new) A consolidated material, wherein before consolidation the material is at least one of porous and particulate and comprises sand and wherein the material is consolidated with a consolidating agent which is particle-free and comprises at least one of a hydrolysate and a precondensate of (a) one or more organosilanes of formula (I)



wherein the radicals R independently represent non-hydrolysable groups, the radicals X independently represent hydrolysable groups or hydroxyl groups, and n is 1, 2 or 3, at

least one of the one or more organosilanes of formula (I) being an arylsilane; and (b) optionally, one or more hydrolysable silanes of formula (II)



wherein the radicals X are as defined for formula (I).

61. (new) The consolidated material of claim 60, wherein the agent comprises at least one of a hydrolysate and a precondensate of compounds comprising (a1) an alkylsilane, (a2) an arylsilane, and (b) an orthosilicic ester.

62. (new) The consolidated material of claim 60, wherein the at least one of a hydrolysate and a precondensate has been prepared in the presence of one or more metal compounds of formula (III)



wherein M is selected from metals of main groups I to VIII or subgroups II to VIII of the Periodic Table of Elements and wherein the radicals X independently represent hydrolysable groups or hydroxyl groups and two radicals X may be combined to form an oxo group, and a corresponds to the valence of M.

63. (new) The consolidated material of claim 60, wherein before consolidation the material is porous.

64. (new) The consolidated material of claim 60, wherein the consolidated material is present as a molded article.

**REMARKS**

Entry of the above amendments is respectfully requested.

**Summary of Amendments**

Upon entry of the present Amendment claims 33-38, 40-42 and 50-54 are cancelled, claims 39 and 43 are amended and claims 55-64 are added, whereby claims 39, 43-49 and 55-64 will be pending, claims 39, 55 and 60 being independent claims. Support for the new claims can be found throughout the present specification and in the cancelled claims.

In this regard, it is noted that independent claim 39 corresponds generally to (cancelled) claim 42, independent claim 55 corresponds generally to (cancelled) claim 45, and independent claim 60 corresponds generally to (cancelled) claim 47.

Applicants emphasize that the cancellation of claims 33-38, 40-42 and 50-54 and the amendments to claim 39 are without prejudice or disclaimer, and Applicants expressly reserve the right to prosecute the cancelled claims and claim 39 in its original, unamended form in one or more divisional and/or continuation applications.

Applicants further note that entry of the instant Amendment is proper because it does not raise any new issues and does not require a further search.

**Summary of Office Action**

As an initial matter, Applicants note with appreciation that the Examiner has indicated consideration of the Information Disclosure Statement filed May 2, 2011. In this regard, it is noted that on November 7, 2011 a further Information Disclosure



Statement was filed and the Examiner is respectfully requested to indicate consideration of the November 7, 2011 Information Disclosure Statement in the next communication from the Patent and Trademark Office.

Applicants further note with appreciation that claims 33-36, 38, 42, 45, 47 and 50-54 are indicated to be allowable upon the filing of a terminal disclaimer and that claim 37 is indicated to be allowable upon overcoming the rejection under 35 U.S.C. § 112, second paragraph, set forth in the instant Office Action and upon filing of a terminal disclaimer.

Claims 33-38 and 50-54 are rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over several claims of U.S. Patent No. 7,825,074.

Claims 39-49 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over several claims of co-pending Application No. 11/721,201.

Claims 37 and 43 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 39-41, 43, 44, 46, 48 and 49 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Popall et al., U.S. Patent No. 5,734,000 (hereafter "POPALL").

### **Response to Office Action**

Reconsideration and withdrawal of the rejections set forth in the present Office Action are respectfully requested, in view of the foregoing amendments and the

following remarks.

***Response to Obviousness-Type Double Patenting Rejections***

Claims 33-38 and 50-54 are rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over several claims of U.S. Patent No. 7,825,074 and claims 39-49 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over several claims of co-pending Application No. 11/721,201.

Applicants respectfully disagree with the Examiner in this regard. Nevertheless, merely in order to advance the examination of the instant application, a duly executed Terminal Disclaimer with respect to co-pending Application No. 11/721,201 is being submitted herewith. Claims 33-38 and 50-54 are cancelled, thereby rendering their rejection over U.S. Patent No. 7,825,074 moot.

***Response to Rejections under 35 U.S.C. § 112***

Claims 37 and 43 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants respectfully disagree with the Examiner in this regard as well. At any rate, claim 43 has been amended and claim 37 has been cancelled, whereby this rejection is moot as well.

***Response to Rejection under 35 U.S.C. § 102(b) over POPALL***

Claims 39-41, 43, 44, 46, 48 and 49 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by POPALL.

Applicants respectfully disagree with the Examiner in this regard. At any rate, merely in order to advance the examination of the instant application the rejected claims are cancelled, thereby rendering this rejection moot as well.

**CONCLUSION**

In view of the foregoing, it is believed that all of the claims in this application are in condition for allowance, wherefore an early issuance of the Notices of Allowance and Allowability is earnestly solicited. If any issues yet remain which can be resolved by a telephone conference, the Examiner is respectfully invited to telephone the undersigned at the telephone number below.

January 19, 2012  
Date

Respectfully submitted,

/Heribert F. Muensterer/

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